

# SOLID WASTE MANAGEMENT AND DISPOSAL IN INDIA

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The solid waste generated by the human is growing day by day at a pace that is completely unexpected, the rise of solid waste is a big burden on our environment, although authorities designed to deal with this issue is working on it for a very long time the methods used by them for the disposal of waste is certainly not efficient enough to accommodate this much waste. Improper waste disposal and management, which includes public littering, lack of waste segregation, uncontrolled collection and disposal, and poor waste treatment practices, have greatly impacted the world. According to a World Bank report, 2.01 billion tons of municipal solid waste is generated every year across the world, out of which it is estimated that 33% is not managed properly, Due to this gap a large percentage of the solid waste ends up in the open landfills completely untreated causing several health problems to people, especially among the poor who reside near landfills. The mismanaged waste on the roadside may lead to the transmission of diseases and affect public health. Animals also get affected by consuming plastics and toxic waste. The waste accumulation over time pollutes water bodies and ultimately disturbs the natural balance of the environment.

Improper waste disposal and management directly affect the economy of the country by reducing the income that could be generated through tourist destinations and spots maligned by the waste problem. Also, greenhouse gases emitted from waste contributed to climate change as well. According to a report published in 2016, solid waste generates 5% of global emissions.

According to CPCB(Central pollution control board) India, the waste generated in India per capita has increased from 0.26kg/day to 0.85kg/day. Out of which about 90% of the waste is disposed of without treatment.



## CHALLENGES IN WASTE MANAGEMENT

Increase in population, commercial activities, Heterogeneous solid waste effects waste is treated and managed in India. Handling, transportation and treatment of waste are the major challenges for municipal authorities as well.

Open dumpsites and landfill fires are serious concerns as they cause health risks such as respiratory disease, Malaria, and Dengue environmental problems are a serious concern as they cause health risks such as respiratory disease, Malaria, and Dengue, and environmental problems such as air, water, and soil pollution.

Lack of awareness about waste management is also a big problem in India. Using the same bin for both dry and wet waste makes it difficult to segregate, unorganized waste collection systems and lack of land for waste disposal are some other factors responsible for growing waste problems.

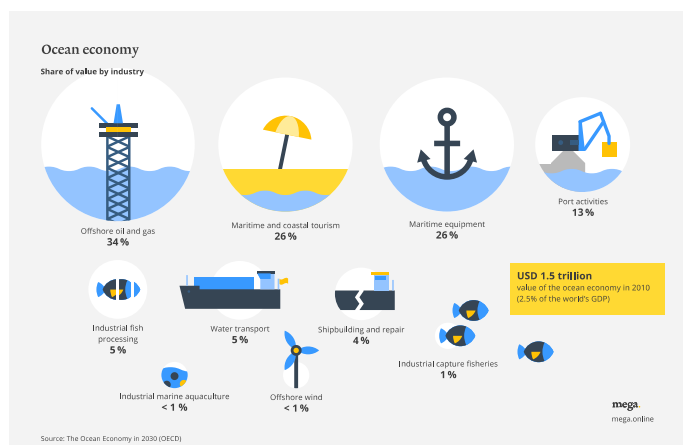


## A STEP TOWARD CHANGE

Governments all around the globe are taking measures to deal with the issue of solid waste management and disposal, startups are coming up with innovative ideas for waste disposal, community-based awareness programs, incentive-based programs, new technologies, and research on biological solutions.

Countries like Germany and Sweden are examples of how a proper structure can be built to tackle this issue, educating the population and developing innovative waste management strategies. A color code-based waste collection system and recycling practices are now part of a daily routine. It has helped in developing a culture of waste management among the communities.

In India Indore did something similar to Germany implementing a color code waste segregation system, QR based waste collection system interconnected waste to energy plant helping Indore to become India's one of cleanest cities, Indore has also converted its landfill side into public place which is generating an additional source of income for the government.



## INDIAN GOVERNMENT AND WASTE MANAGEMENT

The Indian government has taken some strong measures and carried out policy changes to solve the waste management and disposal challenge in the country. The Swachh Bharat initiative has been one of the most powerful nationwide campaigns that have touched the nerve of every individual to contribute to the better collection, segregation, handling, and disposal of waste in India. For FY 21, Rs 12,300 crore budget allocations are proposed for Swachh Bharat Mission which is further aimed to support segregation, sustainable waste processing, and waste disposal mechanisms.

Multiple initiatives, schemes, and awards have been launched such as Swachh Survekshan, and Swachhta Hi Seva, to involve citizens in the waste management drive. According to reports, the door-to-door waste collection has increased to 80% from 53%. The waste processing capacity has grown from 24% to 34%. It is also worth noting that about 45-50% of waste comprising solid waste is organic, which can have a significant impact on how waste is treated and disposed of. If we look deep into the type of solid waste we can find that the carbon and nitrogen ratio and the compostable fraction are more than 50%. It means that organic waste is suitable for composting.